APRIL, MDCCCLVI.

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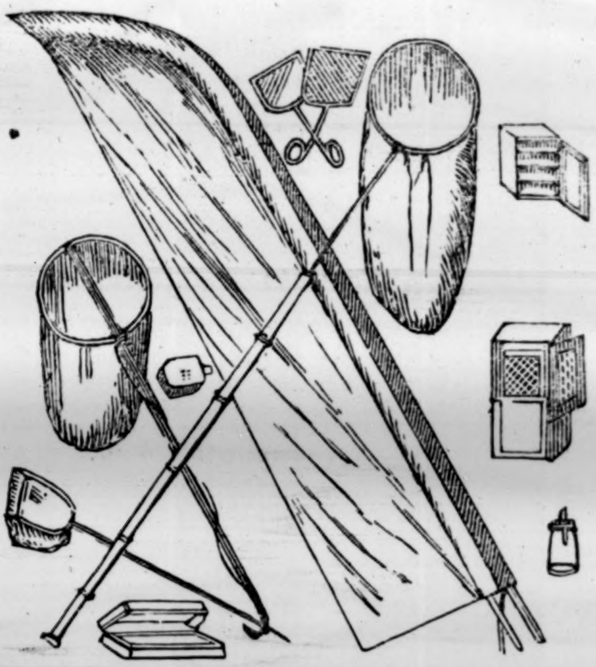

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Mr. Baly thought the sound was produced by respiratory action, which, doubtless, is suspended during hybernation, and suddenly called into action on the insect being disturbed; he considered it might be analogous to that produced by the first inspi- ations of air by a newly born infant.

Mr. Newman read the two following notes:—

The Lost Spider.

"‘The Rev. Revett Sheppard has often noticed in the fen ditches of Norfolk a very rge spider, which actually forms a raft for the purpose of obtaining its prey with ore facility. Keeping its station upon a ball of weeds about three inches in iameter, probably held together by slight silken cords, it is wafted along the surface the water upon this floating island, which it quits the moment it sees a drowning sect; not, as you may suppose, for the sake of applying to it the process of the umane Society, but of hastening its exit by a more speedy engine of destruction. he booty thus seized, it devours at leisure upon its raft, under which it retires when armed by any danger.’—*Introduction to Entomology*, i. 428, Edition of 1828. here is good ground for giving implicit credence to the foregoing statement; r. Sheppard was an acute entomologist, a careful observer, and a gentleman of questionable veracity. It is therefore remarkable that this large spider should, even the present hour, remain unknown to arachnologists. I shall be greatly obliged to y Norfolk entomologist who will seek it, and, if successful, send me specimens, gether with any additional notes on its interesting economy."

The Silk Spider of St. Helena.

"‘The silk spider of St. Helena is very handsomely marked and banded: it spreads web in the warm valleys, and the fibres of its cocoon are so strung as readily to mit of being spun: indeed, they might be used as a substitute for silk.’—*Foster's yage*, i. 373. There is scarcely a statement in the volumes where this is extracted t has been verified by subsequent writers. Can any entomologist give further par- ulars of this silk spider?"

Mr. Newman read a paper entitled ‘Characters of apparently undescribed Austra- n insects, collected at Moreton Bay by J. Gibbon, Esq., including the following cies of various orders,—Dorcostoma Jansoni, Alaus Gibboni, Stenoderus quietus, plœa Lycrophon, Pangonia Walkeri and Dasypogon Grantii.'

Mr. Stainton read a paper entitled ‘How may the onward progress of the Study of tomology be best furthered?’

Part 7, Vol. iii., N. S., of the Society's ‘Transactions,’ recently published, was on table.—*J. W. D.*

BRITISH MUSEUM

Letters on Natural History. By the late FREDERICK HOLME, Esq., to EDWARD HEARLE RODD, Esq., by whom they are obligingly communicated.

[These letters, although having no bearing on what may be called the Zoological news of the day, are replete with those records and observations which give to White's 'Selborne' its enduring interest.—*E. Newman.*]

"Meysey Hampton Rectory,
Fairford, Gloucestershire.

"DEAR SIR,—I am afraid you will think me extremely tardy in fulfilling the promise I made, of writing to you on the ornithological points we have discussed, but I have since my return home been without my books on the subject, which I had lent during my absence, and have received only within a few days. I will begin with one point on which I remember you wished for information,—the distinction of the Scolopax Sabini: it may be known, according to Sir W. Jardine and Mr. Selby, by having twelve feathers only in the tail, whereas the common snipe has fourteen, and the great or double snipe sixteen: the jack snipe has twelve, but it can never be confounded with S. Sabini. Lesson, in his 'Manuel d'Ornithologie,' mentions a new species of snipe, which he calls Scolopax Brehmii, and which he says resembles the common snipe in everything except in having sixteen feathers in the tail, instead of fourteen, and in being altogether mute: I think it is probably a factitious species, but I mention it in case of your chancing to fall in with any such bird. As far as I could ascertain, while in Ireland, the birds wanting in the Irish Fauna seem nearly the same as those which you told me were rare in Cornwall: the nuthatch, in particular, is almost unknown, a pair in the Kildare-street Museum having been pointed out to me as almost the only instances of its occurrence in Ireland; the redstart is also very rare. The common hawk of those parts I saw most of (Kilkenny, Kildare and Queen's County) is the sparrow hawk, which abounds greatly, and seems to live in families; the kestrel is not so common. The bank martin seems more generally diffused than in England. I saw all the four British species of swallow in company on the river Nore, below Kilkenny. Speaking of swallows, the great white-bellied swift (*Cypselus alpinus*) has been shot three or four times in Ireland within a few years, and once in England, at Attleborough, in Norfolk, in September, 1831; I think, but am not sure, that a second instance has occurred near Romford, in Essex. I have heard it suspected by many good ornithologists that the barn swallow of America (*Hirundo rufa*, Linn., *H. Americana*, Wilson) is by no means uncommon in England, but confounded with the common chimney swallow (*H. rustica*), from which it differs chiefly in having the under parts from chin to vent light chestnut instead of white. I have shot myself, at different times, six or seven specimens so coloured, including all ages and both sexes, and have seen others in bird-stuffers' shops: the under parts in these were light chestnut, inclining to buff: Wilson, in the 'American Ornithology,' says the female has them rufous-white, and also that the bird does not build in chimneys like H. rustica, but in barns and outhouses. I intend to keep a look-out for the bird next summer, and if you do the same we can compare the result of our observations. I intend to mention the point to Mr. Gould, to draw his attention to it.

"Since writing the last page, I have found the memorandum of the second English occurrence of Cypselus alpinus, which was at Kingsgate, near Margate. Another bird to which I would draw your attention is the firecrested wren (*Trochilus ignicapillus*, Temminck), a single specimen of which is in the possession of Mr. Jenyns, of Swaffham-Bulbeck, Norfolk, it having been brought into his house by a cat: it has probably been overlooked, from its close resemblance to the common goldcrested wren, from which it differs in having the black band on each side the crest bounded first by a white stripe, and that again by a second black band through the eye; whence Temminck gives it the French title of 'roitelet à triple bandeau.' The arctic gull, properly so called (*Lestris parasiticus*) is not found in England, and scarcely ever so far South as the Shetlands: the bird which has hitherto passed under that name with British naturalists, and of which the blacktoed is the young, is now distinguished as L. Richardsonii, and differs greatly, in shape, size and colour, from the true L. parasiticus. Are you aware that the grebes moult all at once, like the duck tribes? A dabchick (*Podiceps minutus*) which I shot in the change from summer plumage, September 23rd, had only young quills in the wings, so as to be unable to fly, and when we skinned it was so pen-feathered that it could scarcely be made a skin of. Two specimens of the Caspian tern, I am told by a correspondent, were shot in 1830, near Yarmouth, but whether the Yarmouth in Norfolk or that in the Isle of Wight my informant sayeth not. A single specimen of the real great white heron (*A. æquinoctialis*), a bird as large as or larger than the common heron, was shot at Hornsea Mere, East Riding of Yorkshire, in the winter of 1821, after haunting the neighbourhood some time: it is now in the collection of Mr. A. Strickland (the brother of the Yorkshire M.P.) who gave me the account: it is the only *authenticated* British specimen. The same gentleman has a specimen of the black stork, shot last spring in Lincolnshire.

"I make no apology for giving you all these isolated instances, as I know you are as fond as myself of going into the detail of natural history.

"Will you tell Mr. Dennis John that the very large water beetle which he may perhaps remember giving me proved to be the Cybister Röselii, an insect of which I believe there is only a single authenticated British specimen, besides the one he gave me; and as he told me that he had several times seen them in the ditches of the Marazion marshes, he would confer a great benefit on Science by securing them wherever he meets with them, taking great care to keep the legs, antennæ, &c., entirely uninjured. I took several very good insects in Ireland; but the collection I made in the neighbourhood of Penzance, which I sent to an excellent entomologist for the purpose of having the insects named, turned out to contain nine entirely new species of Coleoptera, besides four others new to Britain, and a great many very rare ones: one of the Carabideous beetles will form a new genus; and a beautiful Cassida, which I took in the hedge behind Trenear, is an entirely new insect. If you see Mr. Henry Hocken, of Phillack, will you tell him that I shall feel greatly obliged if he will write me an account of any observations or rare species in Entomology that may at any time fall under his eye in Cornwall, as I and several other lovers of Entomology are endeavouring to establish a sort of entomological correspondence in different parts of the country, for the purpose of interchanging our remarks, and, where practicable, our specimens. I have just finished arranging afresh all my Coleoptera, of which I have more than 600 British species.

"Any remarks on any subject in Zoology which you may be disposed to favour me with I shall be very glad to receive, if you have any inclination to correspond on the subject.

"Believe me very truly yours,
"F. Holme."

"Meysey Hampton, Fairford, Gloucestershire,
"January 11, 1834.

"Dear Sir,—I intend to make this letter a long one, but I am afraid that I shall repeat several of the detached scraps which I gave you in my last, as I neglected to keep a list of contents of the letter, a plan which I recommend to you in a scientific correspondence, as it obviates the risk of saying the same thing over and over again in successive letters, which you are otherwise likely to do when you communicate detached facts; and of detached facts every useful body of science must consist, in my opinion, though too many modern naturalists, and particularly ornithologists, seem to frame their systems in the first place, and to look out for the facts to support them afterwards. I am afraid I led you into an error in my last, in quoting Selby on the Scolopax Sabini; I do not know whether his Treatise on the Water Birds is yet published or not; I quoted from some Illustrations of Ornithology, chiefly of foreign birds, published in conjunction some years since by Sir W. Jardine and Mr. Selby. With respect to the small woodcock you mention as shot at Trebartha, a very small variety is said by Lesson and by Storr to occur occasionally of the common species; and the American woodcock (*Scolopax minor*), which is *said* to occur sometimes in Europe, answers in size and weight to the specimen you mention, but has the nape barred as in the common one, not marbled as in yours: the American woodcock is further distinguished by having all the under parts uniform tawny, rather bright. Scolopax Sabini is easily known, even in a glass case, from any of the woodcocks, by the legs being bare above the knee, which in the woodcocks are feathered to the joint; S. Sabini has in other respects much of the *port* and appearance of a small woodcock, but differs in colour, and has the crown entirely black. Tell me in your next whether you have made anything out of your specimen from these hints. On the variations of colour which you mention of the peregrine falcon, I will quote a letter which I lately received from an excellent naturalist, N. C. Strickland, Esq., son of Sir Wm. Strickland, of Boynton, in Yorkshire: he says, 'I consider that there are three marked varieties: the first, which is very rare, and by far the best for falconry, is very small, and rather bow-legged; blue-gray on the back, like a heron; head very small; eye keen; legs nearly blue; lower belly and thighs grayish white in old birds, with the markings blackish gray; the young have the back grayish brown, with scarce any paler edgings to the feathers, and have no tinge of rufous in their plumage. The second var. (called owl-hawks by the falconers) are very large, with large and very dark eyes; the young reddish brown above, inclining to black, the feathers with broad and distinct ferruginous edges; lighter parts with a strong rufous tinge; legs yellow: old birds bistre-brown above; under parts, where light, dirty brownish white, with scarce any yellowish or grayish; the dark markings beneath the same bistre-brown as the back: this I conceive to be the great-footed falcon of Audubon, Wilson, &c; it is the rarest of all the varieties, and useless for hawking, being spiritless and cowardly. The third or common variety is intermediate between the other two.' This I consider a valuable communication, as Strickland, besides his ornithological knowledge, is conversant with falconry, and has travelled much in Norway, where the birds abound.

"Both the forktailed petrel and the common storm petrel have been more common than usual inland this year, in consequence of the storms. The common species I have often seen out at sea in blowing weather, following in the ship's wake, with a low incessant wailing cry of 'weet, weet:' they skim on the surface in the manner represented in Bewick's plate, except that the wings are always expanded, whereas he shows them closed. I never saw them at sea in calm weather, and hardly ever within sight of land: I once saw one nearly opposite Swansea, in the Bristol Channel, in very stormy weather, but the sailors regarded it as an uncommon occurrence, and said that they were scarcely ever seen above the Lundy Island. Procellaria Leachii, of which you say you have a specimen, breeds in the Hebrides, particularly St. Kilda. I never saw the storm petrel actually *swim*, though they keep their feet almost in the water while skimming as I mentioned above. There are two other species of storm petrel, besides P. pelagica and P. Leachii; one of them, P. oceanica, found in the South Pacific, and distinguished by the comparative length of the tarsi; and the other, P. Americana, on the coasts of North America. These four nearly allied species have been separated by Mr. Vigors as a distinct genus from the true petrels, under the name of Thalassidroma.

"I congratulate your Western district on the accession of that beautiful songster the blackcap to its Fauna; but I am afraid I shall not be able to furnish you with much information on your favourite group, the Sylviadæ, as I am ashamed to say that I am far less intimately acquainted with them than with many other less common groups. The greater pettychaps or fauvette I remember to have heard frequently about seven or eight years since, in the park at Littlecote, Berkshire, the seat of General Popham; but the bird is seldom seen, as it lies in thick bushes, whence it is almost impossible to drive it: the song is most beautiful, but very difficult to identify or describe, as it consists in a great measure of imitations of the song of the other birds, in which species of mockery it is, I think, unrivalled among our British songsters. This is the sum of my personal knowledge of the bird; but I am going up to Oxford next month to take my M.A. degree, and thence to visit a friend in the neighbourhood, whose diligence of research and observation in almost every branch of Zoology are almost unrivalled, and from him I doubt not I shall be able to get you something more respecting the bird in question, which I know is found in his neighbourhood. I am thinking of getting a good air-gun cane: I had the loan of one a short time since, and found it very useful for getting small birds, without the noise and *éclat* of blazing away at their poor little carcases with powder and shot.

"I have not seen any swallows or martins since the general migration; but I think that the account I gave you in my last, of the four swallows in the roof of the Kildare-street Museum, tends to prove that they may hybernate without becoming torpid; though I cannot agree with you in considering the winter torpor of the bat tribes as an analogous case, since the much higher temperature of the blood and greater rapidity of circulation in birds must act as a preventive to torpor in a much higher degree than the lower temperature of quadrupeds; though at the same time I believe it is now nearly ascertained, however anomalous it may appear, that the cuckoo hybernates here, buried in dry leaves and moss: I am told by a gentleman in this neighbourhood that several are annually found by the gamekeepers in that state, at the roots of furze-bushes on Millborough Common. I have lately found, among my bird-skins, one which appears beyond doubt to be the female American swallow, respecting which I mentioned my suspicions in my last. I have now no doubt in my own mind of the frequent British occurrence of that species, but shall not make it public till I have the opportunity next summer of procuring specimens of it and the common species for comparison, and of ascertaining whether the difference mentioned by Wilson of the place of nidification holds good in England: its breeding in barns and outhouses in America may perhaps arise from there being, in many parts of the United States, no chimneys for it to breed in, the most cogent of all reasons against it 'I guess.'

"Of the chiff-chaff and willow wren being specifically distinct I have no doubt, as I know them both well; but it is very difficult to make out anything respecting them from books, from the great entanglement of their synonymy. I do not think the synonyms which Rennie, in his edition of Montagu, quotes from Temminck, for the willow wrens and fauvettes, are often right. Do you know which of the willow wrens it is which White says 'cantat voce stridulâ locustæ'? I never heard any bird with such a note except the grasshopper warbler, but my knowledge of the Sylviadæ, as I said above, is but small, so if you can tell me I shall be obliged. The firecrested wren (*Sylvia ignicapilla,* Temminck) is undoubtedly a different species from the common goldcrested wren, having three bands on the head instead of one; but the two species were very much confounded by the Continental naturalists till the differences were clearly pointed out by Temminck and Brehm: the bird described and figured by Buffon as 'Le Roitelet' is the fire-crested wren: they differ also in habits, the firecrested haunting bushes and the lower branches of trees, while our common species prefers the higher branches of firs and pines, both for habitation and nidification: if you saw the two birds together you could not doubt their distinction. I have not specimens by me, but my Oxfordshire friend has, and if you will tell me in your next whether you think it worth double postage I could enclose you drawings of the heads, the difference in colouring of which would settle the point with you: I confess that I feel interested in it, as this beautiful little species *may* be common among us and yet have escaped detection. No author has yet mentioned the firecrested wren as British, and I believe Mr. Jenyns' specimen, which I mentioned in my last, is as yet the only ascretained English one.

"The bee-eater and golden oriole, which you mention as having been shot in your neighbourhood, are very good British birds: the glossy ibis which you mention is also generally reputed rare in England, but is, I think, much more common than is thought; the similarity of its habits and appearance at a distance with that of the curlews, and the great variations of age and season in its plumage, are the occasion of many specimens passing unnoticed and being consigned to the spit instead of to the Museum.

"You will, I am sure, excuse my saying that you are mistaken in supposing the horse-shoe bat to be the Vespertilio altivolans of White, which is generally considered to be the V. Noctula of naturalists: it is thus described in Griffith's 'Synopsis of Mammalia:'— 'Body yellowish; membranes brown-black; ears oval, but approaching a triangle, inner ears pointed; length of body about 3 inches; expanse 16 inches.' The V. serotinus, which is nearly allied to the last, has 'the back red-brown, brighter in the females; membrane black; ears as in V. Noctula, but larger; length of body under 3 inches; expanse 14 inches.' The horse-shoe bat of England is about 3 inches in body, 14 inches in expanse; reddish ash above, whitish gray below; and it has no internal auricle or secondary ear within the outer one, which, with the bi-lanceolate nasal appendage, at once distinguishes it from every other British species. There are said to be ten or twelve species of British bats, but I do not know much about them; in fact, for the last two years I have devoted myself so exclusively to Entomology that I have paid scarcely any attention to the other branches of the Science, but having now got a tolerable footing among the insects I mean to divide my attention between them and my old friends the birds. Next summer I have some idea of studying fishes, which are much neglected in England, but I doubt whether I shall make much of them.

"I believe I have now discussed, to the best of my ability, all the topics started in your last letter, and will now proceed with whatever scraps of information I have collected since my last.

"The little bustard (*Otis tetrax*) was shot on the 23rd of December last by a farmer, at Brockley Wood, somewhere in the neighbourhood of Oxford: it is now one of the rarest English birds, and I cannot conceive how it continues to subsist in the island, the instances of its capture being so 'few and far between;' while it is seemingly too large a bird to escape detection, and much too feeble of flight to be capable of crossing the Channel from France.

"An itinerant bird-stuffer, named Burl, showed me lately a specimen of the scissor-tailed goatsucker of S. America (*Caprimulgus psalurus* of Temminck), which he assured me he himself shot at Tewkesbury, in Gloucestershire, June 19th, 1825: I should not of course give implicit credit to a bird-stuffer's account of a bird which he had on sale; but from the *soft* and fresh appearance of the skin, which had not the hardened and compressed air of one which had been packed and sent across sea, I should almost feel inclined to credit his statement, in which case the bird would be a singular addition to our British Fauna. There is an uncoloured plate of it in Griffith's translation of Cuvier, which I think you have in your public reading-room. The same man told me that in December, 1832, he saw a specimen of the longlegged plover at Frensham pond (the same place whence White's specimen came from), but could not get at it: at the same time there were some specimens seen there of the Egyptian spurwinged plover, one of which was shot. The same man showed me a specimen of the black-billed whistling duck of the West Indies, which he told me was sent to him in the flesh twenty-two or twenty-three years ago, and which he understood to have been shot on one of the Cumberland lakes.

He had also a pair of buff herons, shot near Dover, in January, 1832.

"Strickland writes me word that two specimens of the Carolina cuckoo (*Coccyzus Americanus*) have been lately shot in Ireland, and one in Wales, but does not give the dates. The American swallow-tailed kite (*Falco furcatus*) has been several times of late years killed in Ireland and England; one was shot two years since in Wensley-dale, Yorkshire, and another in the Bishop of Winchester's park at Farnham, last summer. The eagle owl was shot in the last week of the old year, at Weston-on-the-Green, nine miles from Oxford,—a singular instance of its occurrence so far South.

"My brother shot a water-rail the last day of the year, and we made a skin of it, as it is not a very common bird hereabouts: it was prodigiously fat. I am afraid we shall not get many of the rare water birds this winter, as it seems to be set in for an open season; but you on the sea-coast have a better chance for such windfalls than I have in my inland situation.

"I should have mentioned above, in speaking of the Noctule bat, that the length as there given is exclusive of the tail, which is an inch and a half more. I myself think that White's description comes nearer to V. serotinus, but Fleming and Sir W. Jardine refer it to V. Noctula, the synonyms of which have been much confounded with those of V. serotinus. In the Catalogue of the Zoological Society's Museum, in Bruton Street, I see a species of bat mentioned as British by the name Plecotus brevimanus, *Jenyns* (short-armed long-eared bat), but I do not remember the specimen, nor in what it differs from the common long-eared bat (*P. auritus*). As you seem to have studied the bats, can you tell me whether you ever observed any difference? Fleming says that the V. Noctula (or altivolans of White) winters in Italy: can you tell me the time of its migration, as you say it is not uncommon with you?

"As a proof how much birds are influenced in their habitat by temperature, I give you a list of European birds found in the Indian provinces at the foot of the Himalaya, where the average climate is much as in England: the list is partly from the notes of the Hon. F. J. Shore, partly from specimens in the Liverpool Museum, collected in India by Mr. Everest: those which may be slight varieties of the European species are marked with a query:—Falco subbuteo; F. tinnunculus; F. nisus; F. ater (the black kite of Germany); F. rufus (moor buzzard); F. cyaneus (hen harrier); Strix flammea; S. brachyotos; S. otus; Corvus corone; Oriolis galbula; Sylvia Phœnicurus; Saxicola rubicola (stonechat); Motacilla flava (yellow wagtail); Fringilla domestica (common sparrow), only slightly differing from ours; Fringilla carduelis? (goldfinch)—I think this is probably an allied species, F. spinoides, *Gould*, wanting the black and white on the head; Cuculus canorus; Sitta Europæa, a slight variety, deeper coloured on the breast; Upupa Epops; Alcedo ispida, a trifling variety, rather smaller; Hirundo riparia; Pterocles setarius (the pintail grouse of Spain); Perdix Francolinus (the Francolin partridge); Tetrao Coturnix; Calidris arenaria (sanderling); Himantopus melanopterus (longlegged plover); Charadrius pluvialis? Jardine and Selby think may be specifically distinct, but it is very closely allied; C. hiaticula? Vanellus melanogaster, *Temm.* (Tringa squatarola, *Linn.*); Ardea Egretta; A. Nycticorax; Ibis falcinellus (glossy ibis); Numenius arquatus (curlew), a small variety; N. phæopus (whimbrel); Tringa Temminckii (stint); T. cinerea (knot), a slight variety; Totanus calidris (redshank); T. ochropus; T. glareola; T. hypoleucos; Limosa melanura (godwit); Scolopax gallinago; Gallinula pusilla; Porphyrio hyacinthinus (purple water-hen of Italy); Podiceps minor; Anas rutila (ruddy goose); A. strepera; A. acuta; A. Penelope; A. querquedula; A. crecca; A. ferina; A. nyroca; Mergus merganser. The names are from Temminck. Besides these, the green and spotted woodpeckers, creeper, nutcracking crow, &c., of Europe, are all represented by birds differing just enough to show them to be distinct species. I remember to have read that Humboldt attempted to draw what he termed *isothermal lines*, viz., lines bounding and connecting the different regions throughout the earth in which the mean temperature of the atmosphere was the same, in which, according to his theory, the natural productions would come under the same, or at least under allied genera: the birds of Nepaul and the Dhoon, as I have given them above, seem strongly corroborative of some such arrangement, though I am afraid that, like many other plausible theories, its application to Zoology would never become more than a matter of curious speculation.

"Have you ever found Montagu's ashcoloured harrier in Cornwall? the bird described by Selby as the female is (according to Strickland, who is well acquainted with the species) a young bird: Montagu likewise describes a young male for the mature female, stating that the under parts are of an uniform colour, which is not the case, as in the female 'every feather underneath, for a considerable space on each side the shaft, is very much darker than at the edges, so as to give the appearance of lengthened streaks down the breast, belly and sides, but more particularly on the breast.' It is a singular character of the bird that the colour of the irides varies in different specimens, being in some deep hazel, in others very light yellow: it may, however, always be known from the common hen harrier, exclusive of the differences in the plumage, by almost entirely wanting the ruff on the neck so conspicuous in both sexes of the hen harrier when alive: the ashcoloured harrier is also much smaller. The following are the dimensions of four specimens, given by Mr. Aikins in the 'Zoological Journal:'—'A male, killed June 17, weighed 9¾ oz. troy; length 17½ inches, breadth 3½ feet: a female, killed June 17, weighed 10⅓ oz.; length 18½ inches, breadth 3 feet 6½ inches: a female, killed June 19, weighed 9¼ oz.; length 17½ inches, breadth 3 feet 9 inches, length of tail 9½ inches: a female, killed July 1, weighed 8½ oz.; length 17 inches, breadth 3 feet 9 inches, length of tail 9 inches.' 'In the crop of the first,' says Mr. Aikins, 'were five lizards in fragments, the tails only perfect.' Strickland describes the young, from birds which were observed in the nest till full-feathered: 'Young female: head and round the eyes dirty white; crown and neck orange-brown, spotted with umber; base of feathers on the nape white; wing-coverts orange-brown, marked with umber; throat yellow-white; two middle tail-feathers umber, the rest orange-brown, barred with umber; otherwise like the young male. Young male: head, neck and upper parts umber, margins orange-brown; upper tail-covers pale hair-brown; primaries and secondaries brown-black; outer webs of the primaries tinged with gray, which is not the case in the female; tips of secondaries yellowish white; plumage in general of a lighter cast than that of the young female.' I rather think that Strickland intends to publish something on Ornithology shortly; if he does it will be something worth having, as he is one of the best ornithologists I know.

"I believe my budget of scraps is now exhausted, and I dare say you think it is quite time it should be; but I hope you will return to the attack shortly, as I shall be grateful for any information you will give me in any branch of Zoology; so in hopes of hearing soon from you,

"I remain very truly yours,
"FREDERICK HOLME."

'*The World of Insects: a Guide to its Wonders.*' By J. W. Douglas, Secretary to the Entomological Society of London. London: Van Voorst, 1856. 245 pp. 12mo. Price 3*s.* 6*d.*

THERE is not an entomologist, from the Land's End to John-o-Groat's, but will read with pleasure the announcement of a book by Mr. Douglas: one and all will be influenced by a kindly feeling for the man, fully justified by antecedents: and will, furthermore, assuredly expect to find something remarkable, profound, or new, because they have perceived, whenever Mr. Douglas has put pen to paper, promises of something far beyond the average of entomological contributions to our stock of knowledge. Thus, when the curtain is drawn up on his first performance, he will behold a sea of smiling faces prepared to give him a hearty, even an enthusiastic, welcome.

Now be it known unto all men, that the "we" of a review is but an individual; and, moreover, an individual as liable to error as any other; often the mere man of straw in the *rostrum;* and therefore his *dictum*, however dogmatic, and "*dog*matism is nothing more than *puppy*ism matured," is of no value, and can only receive its value in the sequel. Of course, then, the "we" of 'The Zoologist,' on this occasion, is but an individual; and he does not wish either to compromise 'The Zoologist' or to injure an author, by the unintentional misuse of a pen, intrusted on this particular occasion to his feeble hand: he has undertaken the task reluctantly, but having undertaken it "Business must be attended to," as Mr. Douglas informs us, in his opening paragraph.

Well then! the book is disappointing; yes, reader! disappointing, because we had formed so high an opinion of the author's abilities that we were sure not to be satisfied with anything that did not soar vastly above mediocrity. Just, however, in inverse proportion to the absence of the remarkable, the profound and the new, is the presence of the agreeable, the seductive, the amusing, and, to many, of the instructive.

No book could ever be more truly characterized as a compilation, but certainly no compilation ever displayed an author in a more favorable light; he is perfectly at home with every writer who has touched his subject, and passing by the technical, the vapid and the erroneous, as though he saw it not, he reproduces, with great gusto, the original, the vivid and the true. He has Rusticus at his fingers' ends, and gives him a marked preference: he cites Rusticus on the apple weevil; Rusticus on the apple moth; Rusticus on the American blight; Rusticus on the gooseberry grub; Rusticus on the burying beetle; Rusticus on the tiger beetle. Side by side with these, are long extracts from Smith's admirable Catalogue of Bees, and, like the two great landscape painters, ancient and modern, lately placed in similar juxtaposition in our National Gallery, these two word-painters of insect-life, writers of the past and present generation, detract nothing from the merits of each other. But while noticing the extent of these citations, it is but justice to Mr. Douglas to say that they are always made with the most perfect fairness; chapter and verse are given with scrupulous accuracy; and the shade of Rusticus, once disturbed in its rest, by the award of a pension and a salary to the two arch pilferers of his treasures, must rejoice in finding that he has at last found a commentator and quoter who fully and honestly adopts the motto of *suum cuique.*

Let not the reader, however, for a moment apprehend that the 'World of Insects' is filled with quotations: it is not so: quotations there are in abundance, but they are connected together by the happiest interludes; they are pearls indeed, but pearls strung together on a thread of the richest gold. Mr. Douglas seems to possess a mine of wit, and that of the purest ore. Wit, or the assumption of it, is the attribute, or perhaps, the weakness of entomologists, and is most diversified in its development; the wit of one is cumbrous, reminding us of the gambols of an elephant; the wit of another is caustic and practical, developing itself in unpleasant words: the wit of another,

> "like a polished razor keen,
> Wounds with a touch that 's scarcely felt or seen;"

but the wit of Douglas wounds not at all,—it plays around its object like the luminous, but innocuous, flash of summer lightning.

The book is divided into twelve chapters:—the House: the Garden: the Orchard and Fruit Garden: the Fields: the Hedges and Lanes: the Fences: the Heaths and Commons: the Downs: the Woods: the Waters: the Sea-Shore: the Mountains. We give a short extract from "the Garden," an extract which fairly exhibits the spirit pervading the whole.

"The garden being an artificial assemblage of certain plants within a restricted space, there to be cultivated for the sake of their foliage, flowers or fruit, it follows that all the insects attached thereto have thus the conditions favourable to their increase proportionably multiplied and cared for. Some insects accordingly abound in gardens, not only in those attached to mansions in the country, but in those small parallelograms attached to modest suburban residences, which are ironically, or by courtesy, termed gardens, but the number of *species* found is not very great. Many garden flowers, however, are attractive to insects born and bred beyond the boundary wall, and draw them from the surrounding woods or fields: so far a garden is an advantage to a collector, for some of the visitors are rare and not otherwise to be obtained, or at least not without great trouble. I allude more particularly to the Sphingidæ,

> 'Soft moths that kiss
> The sweet lips of the flowers and harm not,'

hovering over them, *Petunias* especially, in some years in great abundance. I suspect that if gardens near the south-coast were attentively watched on summer evenings the number of our native species of Sphingidæ, at present very small, might be increased, and some of the rarer species of the family be more often taken than they are at present.

"Did you ever see a Sphinx fly? There is nothing to compare its motion to, except a flash of lightning. While you are looking at a flower in the twilight, between you and it glides a motion, a moving haziness, which is before you and yet conveys to your eye no definite image. Before you have half thought what it can be, you see the flower again distinctly, and rub your eyes, thinking there must have been an illusion, or possibly an unsteadiness of vision caused by the irritation of that gnat that was buzzing about your head; when, lo! the flower just beyond seems to shiver,—you move to see what is there, but there is a move before you, and a dim shadow flits away like a thought. Can it be anything real? Stand still awhile: and now, in the increasing gloom, as you bend over the *Petunias*, holding your breath, you see a darkness visible drop down before you, but its presence is better made known by the humming caused by the rapid vibration of wings. Stir not, or this aërial body will float away. Now you see it deigns not to alight or touch the margin of the chalice, but, poising itself in air, stretches out its long tubular tongue and quaffs the nectar at the bottom. Now or never, if you wish to catch it. Strike with your ring-net rapidly below the flower, raising your hand and turning your wrist at the same moment.

There you have it—*Sphinx Convolvuli!* Look, what a living glory, its eyes like stars brought down for us to look *into*, and behold, we can see nothing but light. But if you wish to see the other beauties of your captive to-morrow, you must kill it: first stop its fluttering by a pinch on the under side of the thorax, and then a dose of oxalic acid on the point of a needle will put it *hors du combat*. It has lost a little of its lustre by struggling in the net, as might have been expected, the scales on the wings of all Lepidoptera being easily rubbed off, but it is as good a specimen as is usually got in this way: perfect ones are rarely obtained, except by rearing them from the caterpillar, and such rare species as this are seldom found in their early states."—p. 28.

Having already expressed disappointment, it would be somewhat inconsistent to wind up with the stereotyped recommendation of good-humoured critics to "rush and buy;" and yet such is our recommendation: the work truly does less than justice to the author's position as an entomologist; it is not self-reliant enough for one who fills to admiration an arduous post in the "World of Entomologists;" but it is the very image of the author as a man; a perfect and pleasing photograph of himself: and we wait patiently for that day when the entomologist, as well as the man, shall be thus fairly pourtrayed by his own hand. In the mean time we must accept what we can get, and we can assure those who are yet on the threshold of the study that they will find our author the most agreeable of instructors.

J. G.

Synonymic List of the British Species of Philhydrida, with Notices of Localities, &c. By the Rev. Hamlet Clark, M.A.

(Continued from page 5008).

Genus HETEROCERUS.

1. H. marginatus, *Fab.* This very variable insect appears to be generally distributed. Like its congeners it burrows in the mud, and may be found in these situations both in salt-water and fresh-water localities.

2. H. obsoletus, *Curt.* Less abundant in the North than in the London district. In profusion near Gravesend; Southend; Lincoln, on the banks of the Witham; Northampton.

3. H. minutus, *Dej.* Apparently more rare than either of the preceding species. Stephens gives as localities Aberystwith, Southend.

I have occasionally found the insects of this genus on the surface of, but more frequently beneath, the mud. The entomologist, when searching for them, will look out for little holes, the entrances to their burrows, and, if possible, on mud which has become firm, at least on the surface. Let him then, with his knife, peel off some of this drier surface, and examine it carefully for their mines. By following them up he will meet with the insects, if they are to be found in the locality. They seldom mine below an inch in depth from the surface.

Genus GEORYSSUS.

1. G. pygmæus, *Fab.* This species, the sole English representative of the family Georyssidæ, is allied to the Parnidæ and Heteroceridæ. "Southend," by Mr. Waterhouse; damp places near London; "in Suffolk and Norfolk;" and "in the Annan, near Moffat;" are the principal recorded localities.

Genus PARNUS.

1. P. prolefericornis, *Fab.* Common everywhere, under rejectamenta, at the roots of wet grass.

2. P. auriculatus, *Illig.* I have seldom met with this distinct species. Wandsworth Common; Kimpton; Marton; Pentland Hills.

3. P. Dumerilii, *Latr.* So far as I am aware, this insect has not been taken for several years in England. "Banks of Wandle," "Garrett Green," "in Yorkshire," "banks of the Trent," are the recorded localities. I am indebted to Mr. Janson for my example, which was taken, many years ago, near Dorking, by Pelerin, who supplied the principal London cabinets with the species.

Genus ELMIS.

1. E. Volkmari, *Panz.* This handsome, large species is not uncommon, and is widely distributed.

2. E. variabilis, *Leach.* Not rare in the northern counties; taken in profusion, by Dr. Power, near Wallington; North Wales; Carlisle; common in one of the deep lakes of Mull.

3. E. lacustris, *Steph.* Allied to, but apparently distinct from, the previous species. It is to be noticed that while E. variabilis, *Leach*, is taken only or principally in the northern counties, E. lacustris, *Steph.*, has its metropolis in the southern. I have never been so

fortunate as to meet with it myself. The recorded localities are "near Hull," "Norwich," "banks of Teviot," "Norfolk."

4. E. æneus, *Müll.* The most abundant of the genus.

5. E. cupreus, *Müll.* This and the following species are readily separated from their congeners by the absence of any thoracic longitudinal lines. From Mr. Dawson's cabinet I find that this species is to be found in profusion in the Isle of Wight. I have taken it very sparingly near Llangollen, and also in the Snowdonian district; also taken by the Rev. W. Hey in Yorkshire, and by Dr. Power in Northumberland; and, according to Stephens, "near London."

6. E. nitens, *Müll.* Smaller and more brassy than the last. I know but little of the habits or localities of this species. It appears to be local or rare. "Near London," *Mr. Stephens.*

7. E. parallelipedus, *Müll.* Readily distinguished from all congeners by its oblong form. Not common, though generally distributed. Exeter; Manchester; Scotland.

Genus SPERCHÆUS.

1. S. emarginatus, *Schal.* Few cabinets possess this species, considered one of the rarest of our British insects. I imagine that, like many other "rarities," it may be found in profusion, and that our ignorance respecting it proceeds, not from its being difficult to discover, but from our not searching for it in its proper habitat or season. Windsor; near York; Kensington Gardens; Yaxley Fen; have been given as localities. "Quelquefois assez commun sous la vase dessechée des fossés, ou dans les eaux stagnantes."—*Fairm.*

Genus HELEPHORUS.

1. H. grandis, *Illig.* Common everywhere. At once distinguishable from its size.

2. H. nubilus, *Fab.* Not abundant. Sandy places, Copenhagen Fields; Holme Fen.

3. H. rugosus, *Oliv.* Not common. Taken occasionally in abundance in spring and autumn floods.

These two species may be at once distinguished from their congeners by the carinated interstices of their elytra.

4. H. aquaticus, *Linn.* A most abundant species.

5. H. griseus, *Herbst.* Also abundant.

To point out fully the distinction between these species (4 and 5), and to unravel their tangled synonymy, requires more space than the limits of this paper will allow: they are represented by Erichson (Kaf. d. Mark. Branden), by his H. aquaticus, H. granularis, and H. griseus; by Mulsant, by one species only, H. granularis, which single species consists of var. A. arcuatus, var. B. obscurus, var. C. granularis, var. D. minutus.

So far as a careful collation of different and well-stored cabinets of British specimens, with the descriptions of these authorities, will decide the question, it would appear that in England at least there are two, and but two, species; that is, an insect larger, darker, though most variable in size and colour,—the H. aquaticus, *Linn.* (= probably H. granularis, *Linn.*); and a species smaller, narrower, elytra always pale testaceous, and anterior and lateral margins of thorax usually pale,—H. griseus, *Herbst.*

In stating this as the result of long and minute investigation, I would notice the impossibility of coming to a *satisfactory* conclusion on the point in the absence of large series of specimens from each of as many *different* localities as possible. Dr. Power's cabinet contained perhaps 150 examples of these two species, and mine about 300. In a smaller series the probable absence of specimens *connecting* sets of varieties would tempt to break the group up into more species; and there would not be the same satisfactory evidence that, notwithstanding these connecting individuals, two distinct species could be established as indigenous.

6. H. dorsalis, *Marsh.* Rare. Hertford; Norfolk; also at Wandsworth Common, by Dr. Power. The specimens which I have examined agree as little with Stephens' description as with his figure (Illus. ii. pl. xiv. 1). The insect appears to be tolerably constant in colour; elytra dusky black, with two testaceous well-defined patches at apex, and also an irregular band of the same colour across the shoulders.

7. H. pumilio, *Erichs.* A distinct and beautiful species. I know of only two British examples, one in each of the cabinets of Dr. Power and Mr. Waterhouse, taken, at the same time, by Mr. Bates, of Leicester, among the *débris* of a flood; in general appearance not unlike some small specimens of H. aquaticus, *Linn.*, but totally distinct by well-defined markings on elytra. The H. pumilio of Stephens, Cab. and Man., is H. nanus.

8. H. nanus, *Sturm.* Rare. Sufficiently described by Stephens. Sturm's figure is bad. Most of the specimens I have seen were taken, twenty years ago, in the Cambridge district; Dr. Power took it not unfrequently; and in the cabinet of Mr. Babington, St. John's

College, there is a fine series, taken probably about the same date. I should be glad to learn that any of the entomologists of Cambridge had succeeded in re-discovering a locality for it.

Genus HYDROCHUS.

1. H. elongatus, *Schal.* Taken occasionally near London, and also in the fen districts and other localities, but nowhere abundantly.

2. H. angustatus, *Mull.* More common than the preceding.

3. H. brevis, *Herbst.* I have never met with this insect, which appears to be rare. It is found occasionally in the neighbourhood of London, and also in Norfolk.

Genus OCTHEBIUS.

I have pleasure in acknowledging the assistance that I have derived, in the examination of this genus, from Mr. Waterhouse's paper, read before the Entomological Society, April, 1853, and published in Part VII. Vol. ii. of the 'Transactions' of that Society, to which I refer your readers for distinctions between the species.

1. O. exculptus, *Muls.* Common on moors in the North of England.

2. O. marinus, *Pk.* Generally distributed along the coast. In Lancashire, below high-water mark, October, 1855; also, by Dr. Power, at Sheerness, April; and Lymington, June, 1854.

3. O. margipallens, *Lat.* I am indebted to Dr. Power for my only examples, taken by him in mud-pits, Sheerness, April 15, 1854, in profusion; also single examples at Wandsworth and Sydenham.

4. O. æneus, *Waterh.* "Putney Heath, in May," is given as Stephens' locality; taken at Cowley, near Uxbridge, in tolerable abundance, by Dr. Power; also, sparingly, at Wandsworth.

5. O. pygmæus, *Fab.* Common everywhere.

6. O. bicolon, *Germ.* This insect appears to be common through France: in this country it is more rare, though generally distributed. Near London; Norfolk; Suffolk; W. England; Scotland.

7. O. rufo-marginatus, *Steph.* Near London, and Netley, are Stephens' localities. Birch Wood, July, 1855; near Wallington, Northumberland, August, 1855, by Dr. Power. I have never met with this species.

8. O. æratus, *Steph.* Not uncommon.

9. O. exaratus, *Muls.* The only locality for this species, so far as I know, is Gravesend, a ditch between the town and fort, where it was taken very sparingly by G. R. Waterhouse, Esq.

Genus AMPHIBOLUS.

1. A. atricapillus, *Waterh.* I introduce this species with some hesitation. It is based upon a single example in the cabinet of Mr. Davis, described by Mr. Waterhouse in Ent. Mag. vol. i. There is some reason to fear that this single example is lost. Its reputed locality was Hebden Bridge.

Genus HYDRÆNA.

1. H. testacea, *Curt.* Battersea Fields; near Epping; Halifax. I do not know of any *recent* examples of this species: it exists in several of the old cabinets.

2. H. riparia, *Kug.* One of the largest species of the genus. I have taken it occasionally in Wales. Probably to be found more frequently near London.

3. H. nigrita, *Germ.* Four examples near Bettys-y-Coed, September, 1855; Dr. Power found it also in Northumberland.

4. H. gracilis, *Germ.* Among the *northern* representatives of this genus probably the most abundant. I have taken *many thousands* in the mountain rills of North Wales; the Rev. W. Hey found it in profusion in Yorkshire.

5. H. flavipes, *Stur.* I have never met with this beautiful little species, but am indebted to Dr. Power for the examples in my cabinet, taken by him in the Wansbeck, near Wallington.

6. H. pygmæa, *Waterh.* I found this species sparingly in North Wales. Taken, according to Stephens, near London.

The sexual dilatation of the palpi of this and the preceding species deserves attention. I do not discover that the same obtains in any of the former species of the genus. A single example of Hydræna in Mr. Waterhouse's cabinet will probably prove to be a seventh species.

Before I leave this genus let me give one word of suggestion to your readers who desire to obtain examples for themselves: PATIENCE. There may be in the net one hundred examples, all, without a special exercise of this entomological virtue, to be thrown aside with the *débris.* First of all separate (with the net *in the water*), as far as possible, all leaves, sticks, &c., by washing; then spread out carefully the remainder, and *watch.*

Genus Limnebius.

1. L. truncatellus, *Thunb.* There seem, by general consent of entomologists, to be two distinct sizes of this insect, which is not uncommon.

2. L. lutosus, *Marsh.* Mr. Hey has taken this species near York; I have also received it from Orkney; "near London," *Stephens.*

3. L. nitidus, *Marsh.* I took this sparingly in Holme Fen, May, 1853; near London.

4. L. picinus, *Marsh.* Horning Fen, 1854; also near London.

Genus Berosus.

1. B. spinosus, *Ahr.* Not uncommon in the salt-marshes near Lymington.

2. B. luridus, *Linn.* In profusion at Southend, May, 1853. Common.

3. B. æriceps, *Curt.* Not a rare insect, though I have never met with it.

4. B. globosus, *Curt.*

Genus Hydrophilus.

1. H. piceus, *Linn.*

Genus Hydrous.

1. H. caraboides, *Linn.*

Genus Hydrobius.

1. H. oblongus, *Herbst.* Though Whittlesea Mere is given by Mr. Stephens as a locality for this insect, I have never met with it in any of the fens. Common at Southend; Sheppy; Gravesend.

2. H. fuscipes, *Linn.* Common.

3. H. bicolor, *Payk.*

4. H. globulus, *Payk.*

5. H. æneus, *Germ.* The only species of the genus apparently rare. I have never been able to meet with it.

Genus Laccobius.

1. L. minutus, *Linn.*

2. L. bipustulatus, *Marsh.*

The number of species which Stephens has attempted to form from this genus sufficiently proves the variableness of the insects. I believe that any ordinary series of examples in our cabinets will contain individuals connecting together his species, and that the genus will stand as above.

Genus PHILHYDRUS.

1. P. lividus, *Forst.*
2. P. melanocephalus, *Oliv.*
3. P. marginellus, *Fab.* All of these insects are tolerably abundant.

Genus CHÆTARTHRIA.

1. C. seminulum, *Payk.* Certainly rare. Stephens gives as localities Norfolk, Suffolk, Wimbleton Common.

Genus CYCLONOTUM.

1. C. orbiculare, *Fab.* Common, at roots of herbage, in damp localities; under planks, &c.

Genus SPHÆRIDIUM.

1. S. Scarabæoides, *Linn.*
2. S. bipustulatum, *Fab.*

Although the *habits* of this and the following genera, comprising the Geophilidæ of Mulsant, are totally different from those of the insects which we have been considering, I introduce them here, as completing the group Palpicornes. I intentionally *omit*, with regard to this group of insects, notices of *localities:* the species have up to the present time been so little examined that any such notices would probably rather mislead than direct. I rejoice to remember that *now* entomologists think the group not unworthy of attention; so that we may hope to obtain some accurate knowledge of the respective range of each species throughout our islands. The *specific distinctions* of these insects have been very carefully studied by Mr. Murray and Mr. Waterhouse. The former has published in the 'Annals of Natural History' a valuable paper, pointing out their relative differences of structure (Vol. xii. No. 68, Aug. 1853); and Mr. Waterhouse has kindly furnished me with a complete and carefully drawn up MS. list of their synonymy, as adopted by the principal authors of the Continent and Great Britain.

Genus CERCYON.

1 .C. obsoletum, *Gyll.*
2. C. Hæmorrhoidale, *Fab.*
3. C. hæmorrhoum, *Gyll.*
4. C. laterale, *Marsh.*
5. C. unipunctatum, *Linn.*
6. C. quisquilium, *Linn.*
7. C. terminatum, *Marsh.*
8. C. nigriceps, *Marsh.*
9. C. pygmæum, *Ill.*
10. C. littorale, *Gyll.*
11. C. depressum, *Steph.*
12. C. aquaticum, *Muls.*
13. C. melanocephalum, *Linn.*
14. C. lugubre, *Payk.*
15. C. flavipes, *Fab.*
16. C. minutum, *Fab.*
17. C. anale, *Payk.*

Genus MEGASTERNUM.

1. M. obscurum, *Marsh.*

Genus CRYPTOPLEURUM.

1. C. atomarium, *Fab.*

I will only add, in conclusion, that, if there are any of the younger readers of the 'Zoologist' or others who are desirous of examining these interesting families, but feel at a loss in regard to nomenclature, I shall have pleasure in giving them any assistance in my power; and if they will entrust me with examples I will return them with their proper names. The only stipulations that I would make are that their boxes by post should be wrapped in wool and *tied up with string*, as well as sealed or fastened with paste; and that the specimens which they contain should be *fairly* mounted.

HAMLET CLARK.

Northampton, February 25, 1856.

Remarkable Act in a Fox.—A short time since, on a Sunday evening, a farmer living in the parish of Lansallos, in the County of Cornwall, left his home with his family to attend the religious services of a chapel in the neighbourhood, and omitted to fasten his ducks in their usual place of safety, a circumstance which a fox from the neighbouring cliff did not fail to take advantage of, by appropriating seven of them to his own purposes. No other traces of them could be discovered, besides some scattered feathers, until the following Friday, when some were found in a neighbouring field, dead, and carefully covered over with earth and leaves. Of another of those unfortunate ducks, however, the case was singular. The poor bird was found buried in the earth, all but its head, which showed some signs of life. It was, therefore, dug up carefully; and by the tender nursing of the farmer's daughters, who fed it with milk, it was restored to health and strength. After the double escape, first from the jaws of a fox, to which its companions had fallen victims, and afterwards from premature interment, the kind-hearted farmer declares that this, after all, fortunate duck, shall be suffered to live on to the full extent of its natural life.—*Jonathan Couch; February*, 1856.

Deer feeding on Horse-chestnuts.—As some excuse for ignorance of what appears to be a well-known fact, I may plead that I never in my whole life, now verging toward man's usual term, resided in the vicinity of a deer park, and in the casual passing by or through such places the opportunities of observation are very limited. In Bell's 'British Quadrupeds' I find no allusion to the food of deer, whether red or fallow. With regard to Mr. Bree's question, "Is the origin of the name *horse-chestnut* correct? and will our English horses eat the nuts?" (Zool. 4993), I can only reply, that having seen the statement in print somewhere I quoted it as in the 'Zoologist,' 4913, but intentionally as a *rumour* merely until substantiated by evidence. My own opinion of the origin of the name "*horse*-chestnut" has always agreed with Mr. Bree's. I may, however, add that in Vol. xii. of 'Notes and Queries,' p. 407, it is asked "Why is a horse-chestnut tree called a horse-chestnut tree?" To which is appended the editorial answer, that it "is so called from the similitude of the fruit to that of the chestnut, and *from its being given to horses*." To the last clause of this sentence, which I have emphasised, I would reply in the words of Touchstone to Corin ('As you Like it,' Act 1, Scene 2), "Instance briefly; come instance."—*Arthur Hussey; Rottingdean, February*, 1856.

Origin of the name Horse-chestnut.—The question has been twice mooted of late, in the pages of the 'Zoologist' (Zool. 4913 and 4993), whether the term "horse-chestnut" is derived from the partiality supposed to be evinced by horses for the fruit of that tree. May I be allowed to express my conviction that the opinion of your last correspondent (Mr. Bree) is the correct one, and that it is so called from the coarseness of the fruit in comparison with its congeners. The prefix of the word "horse," intended to express size, is exceedingly common in our language: thus a loud boisterous laugh is denominated a "horse laugh;" the large coarse species of leech is called the "horse leech;" a strong pungent root is called the "horse radish," &c. So in like manner, and with the same signification, we find the word "bull" prefixed to many words denoting size, coarseness, bulk, as "bull-rush," "bull-finch," "bull-frog," &c. Thus again "cob" is frequently used as a distinctive mark of bulk: "cob-loaf" was the largest loaf of the batch; "cob-apples," "cob-nuts," &c., were respectively the largest apples, nuts, &c., of the crop; "cob-coals" were large pit coals; "cob-stones," large stones; a "cob-swan" was simply a swan of the largest size; and Mr. Yarrell tells us that the great blackbacked gull was originally called a "cob," as it is now in some districts, for the same reason; while everybody knows that this is the common denomination of a stout strong pony. Nor is ours the only language which uses such a prefix with this signification: "capercaillie" is no other, in Gaelic, than the "horse of the wood," while its Latin specific name, *urogallus*, "wild-bull cock," likewise refers to the size of the species (see Yarrell *in loco*); and many other instances might be given. I append, in support of the above opinion, the following passage from Sir Thomas Brown ('Vulgar Errours,' Book ii. chap. vii.):— "And so are they deceived in the name of horse-raddish, horse mint, bull rush and many more, conceiving therein some prenominal consideration, whereas indeed that expression is a Grecism; by the prefix of *hippos* and *bous*, that is *horse* and *bull*, intending no more than great." But indeed the whole question of nomenclature is of exceeding interest, and often full of information, if we would dive into the origin of names; and I should be delighted to see in the pages of the 'Zoologist' some inquiry into this point, the meaning of some of the names we so commonly use, and the appearance or the habits of the animal which such names are intended to pourtray. Had I leisure to pursue this subject as it deserves I would gladly devote some time to it, and jot down a few notes on the point, but I must leave it to abler and better pens. Meanwhile, by way of starting the topic and provoking discussion upon it (if possible), I would ask a question that puzzles me much: how comes it that the word "jack," so generally used as a diminutive (*e. g.* when applied to the smaller snipe, and the smaller curlew—meaning the whimbrel), should change its office, and imply bulk and magnitude when applied to the fish pike? That it does so is sufficiently notorious to every one, but I will adduce as an undoubted authority 'The Spectator' (No. 108, *passim*).—*Alfred Charles Smith; Yatesbury Rectory, Calne, February* 8, 1856.

Black Hare at Epping.—A perfectly black hare was shot on the estate of Sir B. Smyjth, M.P., Hill Hall, near Epping, Essex, 31st January, 1856, by Mr. West.—*James Cooper; London, February*, 1856.

Occurrence of the Peregrine Falcon near Norwich.—After dinner on the 26th of December, 1855, I was somewhat astonished to see a relative of "mine host" coming to the window of the room in which I sat, holding up for my notice a beautiful male peregrine falcon, which he had just shot in a field not 100 yards from the farm-house in which I was spending my Christmas: it was at Mr. Q. Cubitt's, Neatishead, near Norwich, Norfolk. I was presented with the bird, which Mr. Argent has preserved for me, and it is one of which I am not a little proud.—*M. C. Cooke; Trinity Schools, Lambeth, January* 25, 1856.

Honey Buzzard breeding in Hampshire.—During a recent visit to a place on the borders of Hampshire and Wiltshire, a few miles from Romsey, I was fortunate enough to find in the possession of a farmer, who is also a bird-stuffer, a fine specimen of the female honey buzzard (*Falco apivorus*), and two young in the down: these he had stuffed. They were taken in a copse close to his house, in the summer of 1852, when the birds nested: the male was shot at, but escaped. The man called them common buzzards, and would not be persuaded of his mistake. "In the nest," he said, "there were no other eggs or young." The adult bird is of a beautiful purple-brown all over, no white appearing anywhere; the tail is slightly barred with two shades of brown: one of the young is more advanced than the other; the quill-feathers just show in one, and not in the other. As it is rare to find this buzzard's nest, I have sent this little notice. Can any readers of the 'Zoologist' give me any more authentic instances of the breeding of the honey buzzard in this country than the following, viz., 1st and 2nd, Cases mentioned by Willughby and Pennant, without giving places or dates. 3rd, In the summer of 1780, in Selborne Hanger, mentioned by White in his 'Natural History of Selborne.' 4th, In the woods of Abergeldie, in Aberdeenshire, mentioned by Mr. Macgillivray in his work on 'British Birds,' Vol. iii. p. 261. 5th, In July, 1838, at Wellgrove Wood, Henley-on-Thames, when two eggs and both old birds were procured (Zool. 437). 6th, In June, 1841, two birds were shot in Waverley Wood, near Stoneleigh Abbey, and the nest was seen: communicated by a game-keeper of Lord Leigh's, who also said that he had previously shot another pair, which he considered had a nest: from a paper of Mr. J. P. Wilmot, (Zool. 437). 7th, In August, 1841, two young males were shot from the nest on the estate of J. Atkinson, Esq., near Hexham. And the case I have noted as occurring in 1852 at Earldom's Copse, near the New Forest, when the male bird and two young were taken; now in my possession.—*Alfred F. Sealy; 70, Trumpington Street, Cambridge, February* 8, 1856.

Note on the Hawfinch (Loxia coccothraustes).—In February, 1855, an individual of this species was taken at Guestwick, without injury, in a trap baited with haws, when the snow was some inches deep. It has since that time been kept in captivity: at first it was exceedingly wild, and still remains very shy, showing no sign of attachment or recognition for the daily kindness exercised towards it in order to win its affections. It feeds principally upon hemp-seed, but if kept exclusively upon it the fine flesh-colour of the bill is changed to a leaden hue, but which disappears when the diet is varied with the fruit of the honeysuckle, mountain ash, yew, Cotoneaster and the Cratægi, of which the kernels only are appropriated, the pulp being invariably rejected. It refuses berries which have no kernels, such as the Viburnum, and will eat but very sparingly of wheat and canary seed. It is an adult male; it did not complete its winter dress until the latter end of October; it displays none of that uneasiness characteristic of birds of passage in confinement at the seasons of migration; it utters no song, but occasionally, when all is still and the day bright, it warbles in a very modest key a few consecutive and by no means unpleasant notes. In July a nestling female greenfinch was introduced, in the hope that its society and extreme tameness might comfort and civilize the stranger, but her lord refused in the most uncourteous manner to acknowledge her presence, by considering her person a part of his perch, without, however, any malignant display of ill will. The greenfinch has since arrived at "years of discretion," fully asserts her rights, and, if the rule of the Pritchard family holds good with them, "They nor care have, nor pain, for the wife wears the breeches." If the hand is put near him he retreats, backing himself against the side of the cage, somewhat after the manner of the kestrel, and if taken will often produce a very painful wound with his sharp and powerful mandibles, uttering a harsh grating note, resembling the syllable "twert" repeated in rapid succession with a nasal accentation (perhaps indicative rather of American than French or German extraction). I have taken Heliothis marginata and Ptilophora plumigera in this neighbourhood.—*R. Drane; Guestwick, Norfolk, February,* 1856.

Migration of the Swallow Tribe.—1852. July 27. A fine calm evening: observed some forty or fifty swifts (the first I had seen for some months) flying very low, and after sweeping round the house for a few minutes, rose almost perpendicularly to an immense height, so as to appear mere specks in the distance.

1852. September 24, 9 A. M. Remarked that some hundreds of swallows had collected on the roofs of the houses situated on the edge of the cliffs, where I have observed they annually assemble in considerable numbers before taking their final departure: some were clinging to the walls, others creeping under the eaves, and then rising altogether they would wheel round the buildings, and settle down again to sun themselves after the heavy dew of the previous night.

„ November 4. Had several swallows about the cottage: they would occasionally alight on a twig or a bramble in the garden hedge, which frequently proving too weak and slender to support them, it was amusing to observe the very awkward manner in which they endeavoured to keep their footing and preserve their equilibrium, but when they did succeed they appeared to enjoy the warmth of the sun, after the rainy and tempestuous weather to which they had been exposed.

„ November 12. Black Martin.—Was greatly surprised at seeing one of these rare birds in company with several common ones. I endeavoured to shoot it, but failed in doing so, the garden being surrounded by houses. 14th, Again observed the black martin between this and Bonchurch.

1853. Septemper 17, 8 A. M. Observed that several hundreds of swallows had assembled on the houses near the cliffs, not only the roofs of which were covered, but the chimneys too: they had also settled in great numbers on some scaffolding fixed to one of the houses.

1854. September 7. Remarked this morning a great number of sand martins: first noticed them on the 5th, and again on the 6th; they were all arriving from the westward, in small detached parties of from fifteen to twenty; their flight, although rapid, was wavering and irregular, not unlike that of a butterfly. They were flying against the wind, which had been blowing from the eastward for a week or more: shot one, which proved by its variegated and beautiful plumage to be a young bird: I believe they are now migrating, and beating up against the wind to gain the narrowest part of the Channel for crossing.

„ November. Saw several martins flying on to the roof of a house near my garden-gate, where they frequently resort towards evening to roost in the holes about the eaves: they were so tame, or fatigued, that some boys who were endeavouring to knock them down with long sticks failed to scare them away.

1855. September 10, 9 A. M. Saw innumerable swallows and martins: there were also some sand martins, all the latter seemingly coming from the westward. About ten o'clock a great number of swallows assembled on the roofs and chimneys of the houses on the cliffs, near the sea (their usual resort), which is about the most southern point of the island. I am inclined to think, from their manner of flying, as well as from their general appearance, that they are mostly young birds, those shot by me late of a season having generally proved to be so.

One autumn (a year or two since, at ½-past 7, A. M.), there were, as I was informed by my sons, hundreds of swallows seen by them at the above hour on the houses on the cliffs: they were so numerous and so fatigued that they flocked to and settled on a pole, which had been thrust out of one of the windows by a boy living in the house, who was amusing himself by occasionally shaking them off, which brought some of the weakest nearly to the ground. After resting for about an hour, or more, they again took wing, directing their flight to the eastward. This again strengthens my conviction and assertion, that swallows in their migration do not cross the channel to the westward of this island, and I can trace them as far east as Gosport, in which neighbourhood they were seen about three years since, by a near relation of mine, settling by thousands on the telegraph wires: those seen here by my sons at such an early hour in the morning, must evidently have been on the wing during the night, or a great part of it, or they would not have been in such an exhausted state on their arrival. Notwithstanding the early arrival of swallows last year, viz., on the 8th of April, it was one of the latest and coldest seasons I ever remember to have experienced in the Undercliff, and, so far as my own observations have enabled me to judge, their arrival is not to be explained or accounted for by sudden or temporary changes of temperature, nor even by a succession of mild or fine days, but is regulated by the forwardness or lateness of the springs in the regions to which they resort during winter; and when the increasing power of the sun invites them to migrate northwards, they come, I have reason to believe, in small detachments, and proceed immediately inland for both food and shelter; for it would be unreasonable to suppose that, at that early period of the year, either flies or gnats would be found on the coast sufficiently abundant to supply their wants. For instance, on the 22nd of April, 1852, I had only seen a few stragglers in this neighbourhood, but on riding on to Newport I saw a great number hawking over a pond in a very sheltered situation near the town, which is almost surrounded by hills. Although swallows are endowed with an instinct that strikes one with wonder and admiration, it would be absurd to suppose that their instinct can point out, or make known to them, the state of the temperature or the changes of climate in a different quarter of the globe, and from which they are separated by two seas and a continent. This, I think, sufficiently accounts for the uncertainty attending their arrival. Last season they delayed their departure unusually late. On the 11th November I saw hundreds of swallows and a few martins: they still lingered, and seemed loath to quit this happy valley, where all was still sunshine, and where their insect-food appeared still abundant; and the day was so mild and lovely, that to see them darting past, their glossy and beautiful plumage sparkling in the sun, it would have required no great stretch of the imagination to have fancied that it was a genial April, not a November day: but halcyon days were transient, and so these proved; a sudden change, so sudden as to be even remarkable in our most changeable of climates, burst upon us on the 14th, and at once dispersed this happy group, leaving only a scared straggler or two, where three short days before they were to be seen in countless numbers.—*H. W. Hadfield; High Cliff, Ventnor, Isle of Wight; February* 13, 1856.

Note on the Common Dipper (Cinclus aquaticus) *near Norwich*—One of these very accidental visitors to this county was shot on the 20th of this month, near the ferry adjoining the Cathedral Close. A specimen, now in the Norwich Museum, was obtained some few years since near Hellesdon Mills; but rare as the water ouzel is in this district, it is still more remarkable to meet with it almost within the walls of a city, where the river, thick and discoloured by the neighbouring factories, contrasts so strangely with the clear running streams of the North, the favourite haunt of the dipper.—*H. Stevenson; Norwich, November* 25, 1855.

Further Particulars of the occurrence of the Great Bustard near Hungerford.—I trust it will not seem presumptuous in me to attempt to add a few particulars which I have gleaned with reference to the great bustard whose capture was recorded in the 'Zoologist' for February (Zool. 4995), though that capture was described by no less a master in Ornithology than Mr. Yarrell. Did it refer to any inferior bird, and had not certain opinions gone abroad that it was a tame one escaped from confinement, I should leave the matter as it is; but as I am sure that every circumstance, however minute, connected with the occurrence of so noble, so rare and so highly prized a visitant, will be deeply interesting to all my brother ornithologists, and as, residing not very far from the scene of its appearance, I have been enabled to prosecute very diligent inquiries amongst all those who either saw the bird or had anything to do with it, I shall without further apology proceed to answer what seems to me to be an unfounded report, and to state the few additional facts of its occurrence which have come to my knowledge (first premising that I should have done so a month since had I not for a time become entangled in a web of falsehoods, which some of those near the place of the capture thought fit to weave when they discovered how notorious a visitor they had had, every one seeming desirous of proving that he saw, if he did not help to capture, the bird; such reports, however, having been diligently sifted, turned out for the most part to be gossip). It has been asserted very positively, by several persons who have examined the bird since it has been in Mr. Leadbeater's hands, that it bears unmistakeable marks of confinement, especially as regards the draggled appearance of the wings and tail; and I fancy this opinion is not a little confirmed by the mysterious broken leg, no very satisfactory cause for which they have discovered; but now let me beg attention to a plain statement of the *facts* of the case. It appears that at the beginning of January (which is the nearest date at which I can arrive) one of Lord Ailesbury's keepers, named King, saw a large bird flying over Henswood, part of Marlborough forest: it was quite alone, and thinking it might be an "eagle" he fired a cartridge at it, though he thought it beyond his reach: as the bird continued its flight, apparently unharmed, he did not suppose he had touched it, but went on his way, thinking no more of the matter. I cannot learn as a positive fact that anything more was seen of a large bird for some days, though there are a great many fables on the subject. And now we come to the time when Mr. Yarrell begins his account, how a little boy found a great bird (proving to be an undoubted great bustard) fluttering on the ground, with its left leg broken; how, notwithstanding its struggles with beak and wings, he succeeded in seizing it by one wing, and so dragged it along the ground for nearly a quarter of a mile to the farm, where its neck was broken by a labourer; and how the boy affirmed that the bird was quite clean when he first saw it, but that he made it dirty by dragging it along the field. Now, putting all these circumstances together,—the keeper firing a cartridge at a large bird; the subsequent capture, by a little boy of tender age, of a large powerful and savage bustard, with a broken leg, but with very slight resistance comparatively on its part: taking into account, too, how the wound in the leg of the captured bird appeared to be a stale one, of some days standing; how the limb was not shattered, as if by shot, but the bone broken off, as if by ball (as was the conjecture of some who subsequently saw it), and that "too high up to have been caused by a trap,"—may we not reasonably conclude that the bird seen by the keeper was one and the same with that captured by the boy, and that the keeper's cartridge took effect and crippled it, and so rendered it by loss of blood weak and exhausted, and an easy prey to its youthful captor? I confess I can come to no other conclusion, and therefore Henswood (the scene of the keeper's shot) being in Wilts, I lay claim to this bustard as a Wiltshire specimen as well, though I own it was so misguided as to cross the border to die in another county; but Wiltshire was always a great stronghold of these noble birds, and the subject of these remarks doubtless came to visit the retreats of his forefathers, though I must acknowledge the reception he met with was neither friendly nor encouraging. Again, from the above premises,—the dragging of the fluttering bird along the ground for a quarter of a mile, in the first week in January, when fallows and arable lands of all kinds are proverbially wet and muddy, and the declaration of the boy that until so dragged its plumage was quite clean,—have we not a very obvious cause of its injured feathers, a very plain straightforward conclusion, and an ample answer to those who judge of its previous confinement from the draggled appearance of the wings and tail? and this in addition to the great improbability (if it had escaped from confinement) that so valuable a bird should neither have been claimed, identified, nor even mentioned by its previous owner; while the fact of its occurrence has been widely and generally made known by the 'Zoologist,' the 'Times,' and the 'Illustrated London News,' in addition to several provincial papers. The bird is now immortalized by Mr. Leadbeater, and in the possession of Mr. Rowland, but it was within an ace of being lost to Ornithology for ever, as at the barn, the scene of its barbarous murder, a council of war was held over it by all the labourers, who were at that hour assembled at dinner, and it was very nearly decided to pick and dress it then and there; but the little boy's brother claimed it for him, and so it was put on his back, and its head was held in his hand, and so he trudged home with his prize to his mother; and no wonder that the urchin said "it was main heavy, and he could n't scarce get along with him," for though described to be in poor condition it weighed 13¼ lbs., and measured 6 feet 3 inches from tip to tip of the wings. Mr. Rowland further remarks, and very justly, that the only way to account for so small a boy so easily capturing a bird as large as himself is that when he caught hold of the *left* wing the bird became powerless, in consequence of the leg on that side being broken, and that when once on its side it could not recover itself to offer resistance. But one more fact have I to offer, and that is the name of the farm which was the scene of the death of the last of the bustards; and that, harmonizing well with the emaciated condition of the bird, rejoices in the euphonious title of "Starve-all."—*Alfred Charles Smith; Yatesbury Rectory, Calne, March* 6, 1856.

Occurrence of the Great Bustard (Otis tarda) *in Cambridgeshire.*—About Christmas, during the last winter, a pair of the great bustards were seen by the fen-men in Wicken and Burwell fens: very soon after Christmas they were shot at, and one was supposed to be wounded; any how after this, only one bird was seen. This bird was noticed by all the people living near or on the fen with whom I have spoken, but partly from the little intercourse between Wicken and Cambridge, and partly, perhaps, from a desire to prevent others from sharing the chance of securing so rare a prize (for the bird has not been seen for more than twenty years in those parts), the news did not reach the collectors in Cambridge until the 1st of March. Several went down immediately, but all of us were equally unsuccessful, as the last time it was seen was on Sunday, March 2nd, when some of the fen-men shot at it, but being too far to have a chance of killing it, they only frightened the bird off, and at present no further tidings of it have been heard. In a piece of cole-seed, which it often was seen to frequent, were found marks of the scratching of a large bird and several feathers, some from the wing, others being the short feathers of the back: from the brightness of the markings of these feathers, the bird must have been a very finely marked specimen. There is such difficulty in extracting true information from the fen-men, that I could not find out the man who fired at the two birds, but several persons concur in stating that it was soon after Christmas. Is it not probable that this might be the same bird which was discovered wounded near Hungerford, on January 3rd, mentioned in the 'Zoologist' for February.—*Alfred F. Sealy; 70, Trumpington Street, Cambridge, March* 17, 1856.

Occurrence of the Bittern in Bedfordshire.—A bittern was shot at Lawrence End, near Luton, Beds, in a plantation, by Mr. Croft, January, 1856; another in January, by C. Morgan, Esq., in Glamorganshire.

Note on the Bittern (Ardea stellaris) *in Devonshire.*—The bittern, unlike many other species once common in Devonshire, has become of late years from a rare bird a regular winter visitor to this county, and has been unusually abundant this season. The following is a list of those which have come under my own observation during the last four years, but I have seen notices in the local papers of many others which have been shot in this and the surrounding counties:—

1853. December 15th, one shot on the mud near turf, on the Exe.
1854. January, one shot near Collumpton.
„ November 27th, one shot in the Clyst marshes.
1855. February 3rd, one shot on the Exe, near this house.
„ December 11th, one shot in the Clyst marshes.
„ December 22nd, one shot by myself, on the Exe.
„ December 26th, one seen several times about this place.
1856. January 22nd, two killed on Slapton Lea.
„ January 23rd, one killed on Slapton Lea.

They appear to be met with either during or after the prevalence of high easterly winds and cold weather, and are usually not at all shy, allowing of close approach before taking to wing. The specimen I killed on the 22nd of December rose within a few yards of me, from the rushes on the "leek-beds" (as they are called), when I was looking for snipe, and had probably only arrived the preceding night, as, though in tolerably good condition, its stomach was quite empty. That seen on the 26th of December was first observed from the windows on the grass lawn close to the house, and was afterwards seen several times about our wood and the opposite side of the river. The three killed at Slapton, on the 22nd and 23rd of January, were shot by a party shooting on the Lea, where I believe it has hitherto been a bird of rare occurrence.—*W. S. M. D'Urban; Newport, near Exeter, February* 5, 1856.

Note on the Spotted Crake (Crex Porzana).—A fine specimen of this most beautiful and elegant bird was captured on October 25th, 1855, by a neighbour (in his garden, situated on the edge of the cliffs, close to the sea), who sent it for my inspection. There had been a strong gale all the morning from the eastward, which had probably delayed its departure. Considering that if released, it might possibly be recaptured, I determined on trying to tame it, but after keeping it in confinement for about a week (during which period it usually fed well), it was found dead in its cage. Although usually quiet enough during the day, after dark it invariably became very restless, endeavouring most perseveringly to thrust its head between the bars, and would continue perambulating its cage till about midnight, when my observations ceased. I infer from this unquietness and great anxiety to effect its escape after dark, that, like the snipe, woodcock, and other species (probably the swallow), it migrates by night. Although somewhat small, its great—indeed almost perfect—resemblance in form to the common corn crake must strike even the least careful observer.—*H. W. Hadfield; High Cliff, Ventnor, Isle of Wight, March* 7, 1856.

Occurrence of the Sclavonian Grebe (Podiceps cornutus) *in Devonshire.*—On the 22nd of January last I visited that most interesting locality for an ornithologist, Slapton Lea, near Dartmouth, and saw a specimen of the dusky or Sclavonian grebe, which had been shot on the Lea on the previous day.—*W. S. M. D'Urban; Newport, near Exeter, February* 5, 1856.

Occurrence of the Little Gull and Common Skua on the Exe.—On the 28th of December last, the man Hall, who killed the avocet in September (Zool. 4895), shot a specimen of the little gull (*Larus minutus*), and the next day an immature example of the common skua (*Lestris catarractes*), which had just struck down and was making a meal off a blackheaded gull, and was so intently occupied on it as to allow him to approach quite close before he fired. Both birds were killed on the Exe, below Topsham, and are very rare on this river.—*Id.*

Occurrence of the Storm Petrel (Thalassidroma pelagica) *at Newmarket and near Cambridge.*—A fine specimen of the storm petrel was picked up in the street of Newmarket, in a very exhausted state, on the 2nd of November; and on the following day another was found dead at Bottisham, near Cambridge: they are now in the possession of Mr. Savell, naturalist, Cambridge.—*A. Fuller; St. John's College, Cambridge, February*, 1856.

Another supposed New Flounder.—I beg to hand you some account of a flounder which has lately come under my notice, it having been taken out of the stomach of a cod.

Extreme length 2¾ inches.
,, breadth, fin rays included, 1½ inch.
Length of caudal rays, ⅝ths of an inch.
,, pectorals, ⅜ths of an inch.
,, head, rather more than ¼ of an inch.

The dorsal commences in advance of the upper eye, and runs down until it nearly reaches the caudal: ventrals very small: the anal, which begins exactly below the gill-cover, and has the appearance of being joined to the ventral, ends posteriorly in the same manner as the dorsal: all the fins are ragged, and partially denuded of membrane: the eyes are even; I cannot find that either is in advance of the other; they seem to be of three colours, first a dark blue, then brown, and the centre or pupil deep black: the scales, a few only of which remain, are not large, and appear to have been very deciduous: lateral line straight: mouth armed in both jaws with numerous sharp-pointed teeth: eyes, &c., on the left side. The upper side is of a pale flesh-colour mixed with horn-colour; the under side is unfortunately gone, but seems to have been whitish: the thickness is about that of four common wafers, and it is almost transparent. At regular distances, on the extreme edge of the dorsal and anal fins, are seven black spots, very conspicuous when fresh, and distinctly visible now the fish is dried. Now what is this fluke? a variety of Rhombus arnoglossus? or a specimen of R. candidissimus of Risso? or a new species? I have never seen a specimen of Pleuronectes diaphanus, which is synonymous with R. candidissimus, but from what I have heard I think it comes nearest to that species. In case it proves that species it will be an acquisition to our seas. I have now seen three specimens, the seven black spots present in all. I possess a specimen of Rhombus arnoglossus, also taken from a cod's stomach, but I cannot satisfy myself that it is that species.—*Thomas Edward*; 16, *High Street*, *Banff*.

Occurrence of Atypus Sulzeri in Britain.—As you, I see, read a paper on Atypus at a meeting of the Linnean Society, may I inform you that when I was in London, in October last, I detected, in one of the store boxes of Foxcroft, three examples of this spider, one of which I sent to Mr. Blackwall and the others I reserved for Mr. Meade. The locality (from the information he gave me of it) is somewhat doubtful; he got them from a friend, I understood him to say in Cumberland: the species was taken apart from any webs, having, I supposed, habits of Lycosa or Salticus. It is very curious that such a rare and almost unknown species should have been discovered twice, at about the same time.—*Hamlet Clark*; *Northampton*, *March* 15, 1856.

Note on Atypus Sulzeri.—Although no arachnologist, I have read with much interest the note by Mr. Newman on Atypus Sulzeri of Latreille (Zool. 5021). One of the authorities quoted, and referred to therein, observes, in his remarks on the nests or tubular cells, "They are composed of very fine silk, closely woven throughout, white or whitish within, and covered exteriorly with yellowish or brownish particles of sand, which give the tube a dirty appearance externally, but inside they are always neat and clean." Is it then probable—nay, more, is it possible—that each time the inmate captures a worm (on which it is supposed to feed) it should break through the walls of its tubular residence, which is described by Walckenaer as being very close, fine and white, resembling the cocoons of some Lepidoptera? Mr. Newman's correspondent also remarks, "In that portion which is exposed and is distended more than the rest, I sometimes discovered one or more minute openings, protected or covered by a little valve or door." Having commenced these observations by saying that I am not conversant with Arachnology, I of course approach the subject with some diffidence; but after a careful perusal of the note I am inclined to think that the Atypus does not obtain worms in the manner suggested, for, if so, would not the "brownish particles of sand found exteriorly" fall through and soil the white carpet-like lining? to say nothing of the "neat" cell being periodically—perhaps daily—converted into what might be called a slaughter-house. And what cleansing, what sweeping together of fragments after each repast would be required! to say nothing of the labour of repairing the breach (an ever-recurring task) in the walls of this "closely woven cell." In the second place, is it not more natural to suppose that the Atypus should by night, if not by day, let itself out where there are "minute openings, protected or covered by a little valve or door." If any elasticity exists in the silk the egress of the spider would probably be effected easily enough, but even without that. Surely if we can bring ourselves to believe that each time it seizes a worm it must necessarily break through, and partially destroy the sack, we may reasonably suppose it capable of breaking through a few threads at the external end, "which is distended more than the rest." And although represented as sluggish by day it may be active enough by night, as most nocturnal animals are. The absence of all appearance of food in the cells goes, I think, a great way to prove that they are nocturnal feeders; and I would, with all due deference, suggest that some one of your correspondents should endeavour to clear up this point, which might, I think, be done at the sacrifice of a night's rest (no great matter to a truly zealous naturalist), by visiting the haunts of these wonderful spiders by night, with a dark lantern, which being suddenly opened some might possibly be discovered wandering, or foraging, in the vicinity of their cells, their retreat to which might be intercepted. Domiciliary inspections might then be made, and, should the greater number prove untenanted, we should then have good reason for believing that they are nocturnal in their habits (as one of Mr. Newman's correspondents supposes them to be), and may possibly leave their house-door open, which would be a great saving of labour; but, if there is the least elasticity in the web, the rent or opening need not be very large. If the Atypus are not found to frequent their subterraneous dwellings during summer, is it not possible that they pass the winter in a torpid state? if so, this would at once account for there being no remains of insects found in their cells,—also for their rather mysterious self-imprisonment. As to the worm found in one nest, it may have been, and probably was, accidental; for it seems very improbable that the spider's means of subsistence, not to say its very existence, should be left to mere chance, *i. e.* to be made to depend on the accidental passage of a worm through its cell, which is said to be only ½ or ¾ of an inch in diameter. It may be remarked that the common spider has in a great measure to trust to chance for its supply of food: this is true enough, but the chances are so much in its favour that they amount almost to a certainty, whereas in the case of the Atypus nothing could well be more uncertain. For the above reasons I am inclined to think that the Atypus either comes forth to feed by night or passes the winter in a torpid state.—*H. W. Hadfield; High Cliff, Isle of Wight, March* 7, 1856.

On the Preservation of Spiders. By R. H. Meade, Esq., F.R.C.S.

In the 'Zoologist' for December, 1852 (Zool. 3676), I published a few observations upon the mode of forming and preserving a collection of spiders, and I then recommended that the specimens should be put up in small glass tubes filled with spirits of wine. Further experience has shown that this plan is open to this great objection, that unless frequent attention is paid to the collection the specimens become spoiled by the evaporation of the spirit, which finds its way through both corks and sealing-wax, the latter being rendered quite soft by the vapour. Being desirous to overcome this difficulty, I made several experiments with different fluids, for the purpose of finding a liquid that would preserve the form, consistence and colours of the spiders, without undergoing decomposition or evaporating rapidly.

Among other mixtures I tried Goldby's Fluid, but found that the specimens immersed in it became soft and spoiled in a few weeks: I also used simple solutions of several salts, without success; when by accident I met with one, which, as far as I have tried it, seems to answer admirably, viz., sulphate of magnesia or Epsom salts. A strong solution of this salt happened to be upon the table one evening in July, 1854, when I returned from a short excursion to the sea-side; and having brought home, among other objects of natural history, a small fish, the name of which was unknown to me, and which I had not then time to examine, I immersed it in some of the solution of salts, thinking it might preserve it for a few days, until I had more leisure. It remained unnoticed in the fluid for two or three weeks, and when removed was apparently as fresh as when placed in it, and had undergone no change of colour. As it appeared to preserve the fish so well, I determined to try the same fluid upon spiders, and the result fully answered my expectations. I have now specimens, which were put up in August, 1854, the colours and forms of which are as perfect as they were on the day they were placed in the tubes.

Though eighteen months can scarcely be considered long enough to afford positive proof of the preservative action of this salt during a very lengthened period, yet the experiment has so far succeeded that I think it may fairly be laid before the public, and I hope other naturalists may be induced to make trial of it. To insure the success of this plan it is necessary that certain precautions be adopted. In the first place, if the salt be simply dissolved in water, the solution decomposes and becomes flaky and turbid in a short time: to obviate this, it is necessary either to acidulate the fluid with a few drops of sulphuric acid or to add to it a little spirits of wine. I have tried both these plans, and give the preference to the latter, the acid I think slightly injuring the colours of the specimens. In the second place, if a recently captured spider (particularly a large-bellied one) be placed at once in a small tube filled with the saline solution, the juices of its body mixing with the fluid cause the latter to become mouldy: I always, therefore, immerse the specimens in rectified spirits of wine, for at least twenty-four hours, and then either wash them quickly in a little water or let the spirit evaporate from the surface before putting them up in the saline fluid. If this last precaution be neglected the salt crystallizes on the surface of the spider, and the liquid becomes turbid, which I account for by the rectified spirit having such a strong affinity for the water that it absorbs it rapidly from the layer of the solution which it first comes in contact with, and the salt assumes the solid form.

The proportions and manner in which I mix the ingredients are—sulphate of magnesia three ounces, hot water six ounces; strain this when cold until it becomes perfectly clear, and then add three-quarters of an ounce of rectified spirits of wine: the mixture may be kept in a stoppered bottle. The specimens look better put up in tubes which are not much wider than the bodies of the spiders; they can then be examined (unless when a minute investigation is required) through the walls of the tubes, without removal from the liquid: this remark will not apply, of course, to very minute species.

In arranging a collection of spiders in drawers, I before recommended that the tubes should be placed in an upright position, by means of small holes perforated in a sheet of card, forming a false bottom to the drawer; but I now think that they show better laid down in rows: a label bearing the name can then be gummed on the upper side, and the tubes may be prevented from shifting their position by means of a number of small strips of vulcanized India rubber stretched across the drawer.

As I stated upon a former occasion, if a simple and good plan for the preservation of spiders and other allied animals (possessing soft bodies, which shrivel up in drying) can be discovered, one considerable impediment to the study of Arachnology will be removed, for hitherto there has been a great difficulty in forming and keeping any collection of these interesting objects, and it is almost necessary to have the beings themselves before us, for comparison and re-examination, to make any proficiency in the science. About 250 British spiders have already been recorded, and the number would very soon be greatly raised if a few more labourers could be induced to enter the field.

Spiders may be found in almost every locality; some inhabit houses and outhouses; others woods, fields and gardens; and with a little practice they may easily be captured in the fingers, without injury to their delicate structures. The collector should carry a small phial or two, filled with spirits of wine, and into these he may plunge most of his captures at once: they are thus quickly killed, and they can easily be taken out and the surface dried by evaporation, when required for examination.

I will close these observations with a few words on the chief places in which to look for spiders. Many will be found beneath stones and pieces of rock; some excavate hollows in the ground, and bring up their young, as, for example, several species of Drassus; some may be met with under the loose bark of trees, or in the leaves of plants, the edges of which they curve together and fasten by silken threads: many of the Clubionæ have this habit: the loose stones forming the dry walls by which the fields are separated in many parts of the country afford shelter to many species, as the Textrix lycosina, the Segestria senoculata, &c.: numbers of the web-forming kinds may be found seated in or near their snares; many of the Epeiridæ, Linyphidæ and Theridiidæ may thus be captured: numerous species live on the ground and should be sought for at the roots of grass in old pastures, or on heaths and commons, or among the stems of aquatic plants; the Lycosæ, which wander about in pursuit of their prey, may thus be found: some spiders excavate deep holes in banks, which they line with silk, as Atypus Sulzeri and Agelena labyrinthica; others live under water, as Argyroneta aquatica; and, lastly, a few inhabit the blossoms of flowers, as Thomisus citreus.

R. H. MEADE.

Bradford,
March, 1856.

Captures of Doritis Apollo in Britain.—I have heard of many captures of Doritis Apollo in Britain, but cold water is always thrown on them, and so no record is often made of extraordinary captures. Sir Charles Lemon wrote to me that one was taken near his house [in Cornwall], but he thought it was imported with plants in the pupa state. Mr. Hudson Heaven told me that his father, the proprietor of Lundy Island, took one (or two) near Portishead, Somersetshire. Weaver took the larva near Ambleside, and Mr. Wailes formerly gave me an account of its occurrence in the Isle of Lewis, besides Sir William Hooker's account. I don't know why Mr. Wollaston did not give the captor's name: that is essential.—*J. C. Dale; Glanville's Wootton, near Sherbourne, March* 8, 1856.

Fascination of a Butterfly by a Lizard.—"One evening, being seated in a room at Gorruchpore, the window of which was open, and the ceiling on one side sloped downwards towards the window, my attention was attracted by a butterfly which chanced to fly into the room. I observed its motions for a minute or two, when I thought there was something that appeared unnatural in them, and the insect began to dart to and fro in one direction, occasionally, however, varying its flight about the room. I looked up to see what it could possibly be at, and instantly observed an ordinary-sized lizard on the cloth of the upper ceiling. I had not even then the most distant idea of what was really going on; but seeing the butterfly dart every now and then at the lizard, I supposed it in play, till its motions became less quick and animated. The lizard remained all this time immovable, but at last suddenly shifted its ground to the sloping part of the ceiling. The motions of the butterfly became still more languid, until at length, to my utter surprise, I saw the lizard open its mouth, and the butterfly directly flew into it. The lizard was about half a minute in swallowing it, wings and all.

Until the last act of this curious scene, though I well knew the lizard's object, I supposed it would probably make a leap at the butterfly, yet had no idea of its succeeding, and expected to see the butterfly fly away. Had I had an idea of the case I should instantly have broken the charm. From that moment I never had the least doubt of the power of fascination: that power I conceive to be *terror*, which, if the object was sufficiently terrible, I believe would act equally on man or any other creature."—*From the 'Bengal Sporting Magazine' for October*, 1836; *communicated by Mr. Frederic Moore.*

Capture of Pamphila Actæon, &c., at Lulworth Cove.—On looking over some of the earlier volumes of the 'Zoologist,' I find a notice of the capture of Pamphila Actæon in Dorset. The following extract from my note-book may not be uninteresting:—"August 22, 1855. Visited Lulworth Cove by an excursion steam-boat from Weymouth. The beauty of the scenery was much enhanced by the fine weather. The Cove is a charming spot, the basin being nearly circular and surrounded by picturesque rocks. The clearness of the water is heightened by a shore of white pebbles. For three or four hours I searched in vain for Actæon: at length I came to some small furze-bushes, overgrown with brambles, fern and thistles, and here was rewarded by finding the object of my search. While the sun shone brightly several specimens of Actæon flitted over the herbage. It looks very small when on the wing, chiefly owing to its manner of flight (like the other 'skippers'), and also on account of its dingy colour. When clouds obscured the sun all the butterflies disappeared, settling on low branches of furze, &c., in which position it was almost impossible to secure them, for directly I approached the spot they dropped down among the grass, &c., and were lost. I noticed more females than males." As the hour was late and the sky clouded I did not secure so many as I wished. Near the same spot I took one Pempelia carnella, in perfect condition, on the wing at dusk, and Pterophorus lithodactylus at rest on the flowers of Pulicaria dysenterica.—*S. C. Tress Beale; Ivy Court, Tenterden, Kent, March*, 1856.

Note on the Occurrence of Exotic Sphinges in Britain.—Mr. Wilson, of Edinburgh, says a pigeon could fly from Algiers to Edinburgh in twenty-four hours, and that moths can fly far over the sea is well known. I have a moth taken at least a hundred miles out at sea, yet Mrs. Raddon was ridiculed when she said she saw a specimen of Deilephila Nerii in Devonshire. I saw a very old English print in which Nerii was figured under the name of the "Rose-bay Moth." There can be no doubt that such insects cross the Channel, especially in a high wind. I saw a specimen of Sphinx quinquemaculatus actually bred at Leeds; another taken at Hull; one at Chelsea, and I have heard of two or three others.—*J. C. Dale; Glanville's Wootton, near Sherbourne, March* 8, 1856.

[Nothing is more probable than that the pupæ of Sphinges which bury themselves in the earth should occasionally be imported amongst the roots of exotic plants. I possessed for many years a specimen of Sphinx Druræi which bore a first-rate pedigree as a true Briton, and I have seen others. I gave my own the cold shoulder because I thought it diminished the value of its neighbours in the same drawer, casting a kind of doubt on their reputation. On the same principle a cabinet of Lepidoptera that contains Podalirius, Chryseis or Virgaureæ, falls fifty per cent. in my estimation; and a cabinet with Daplidice or Lathonia I look on with great distrust, although I know of six Daplidices and about as many Lathonias that really possess clean bills of health.—*E. Newman.*]

Saturnia Pavonia-major four years in the Chrysalis.—For two or three nights were disturbed by a noise something between a mill grinding and a cat purring, a could not make out whether a ghost or mouse, or what other “ something,” had into the cabinet: on examining I found a much-crippled specimen of Saturnia Pa nia-major. I was not aware that I had any pupæ of this insect, and certainly m have received it in 1851, when Mr. Wollaston gave me four or five specimens. I b three males and one female, and was not aware that one was left. I am quite sur had received no others during the five intervening years.—*Id.*

Notodonta camelina not Double-brooded.—In the January number of the ‘Zool gist’ (Zool. 4952) Mr. Crewe remarks, with reference to my note at page 4899, that seem “ to infer that Notodonta camelina is not double-brooded,” which, however, has proved to be the case, and gives, in support of his assertion, an account of fo eggs found by him on the 28th of May, which, on being taken “ especial care o produced moths in the following August. Mr. Crewe does not appear to be aw that many of our moths, when reared in confinement, will produce second broods the autumn; but in order to prove that N. camelina is really double-brooded, he mu show that the species is also produced out of doors in the summer and autumn, fro the eggs laid the preceding spring; in other words, that the four eggs he alludes if he had left them on the bush, would have become moths in August, as they did his cage. Like Mr. Crewe, I have had the eggs of N. camelina laid in May, a produced plenty of moths from them in July and August; but this is no argume whatever in favour of the species being really double-brooded: probably the m abundant supply of food, with less exercise than in the wild state, causes this prem ture development, just as a more scanty supply to the larva will retard the growth. this latter I have had a rather curious instance in the case of Ennomos illunaria: is well known that the larvæ of this species, from the eggs laid by the spring bro produce the small July specimens, the Juliaria of Haworth: if, however, these lar when young be scantily supplied with food, and their growth thereby retarded, th will, if eventually fed more liberally, attain the full size of the autumn larvæ, a produce illunarias in the following spring. In conclusion, I will give a very comm instance in which confinement produces an autumnal brood. If the larvæ of Ar Caja, hatched in July or August, be plentifully supplied with food, we always fin number of the brood grow rapidly, attain full growth, and produce moths in the tumn, while some of the same brood, in the same cage, probably still remain small: they pass the winter out of doors, the artificial manner of living must produce t effect; for I fancy our most inveterate brood-mongers never meet with this moth the autumn, nor see the full-grown larva galloping across their path in October, they do in May and June.—*Edwin Shepherd; Fleet Street, March* 5, 1856.

[I may state that I entirely concur with Mr. Shepherd in believing that Notodo camelina perfects but a single brood in the year, neither can I conceive that the c is altered, or even modified, by the fact that some of the perfect insects are disclo months before the usual time.—*Edward Newman.*]

Cheimatobia borearia in the South.—On the 10th of November last I had pleasure of capturing this species a few miles from this town: they were in co derable numbers, hanging on the twigs of dwarf birches. I obtained both male female. On the same evening my friend Mr. Winter took two specimens, at light, this town. I have never before heard of this insect appearing so far South.—*He Cooke; Brighton, February,* 1856.

3 MY 56

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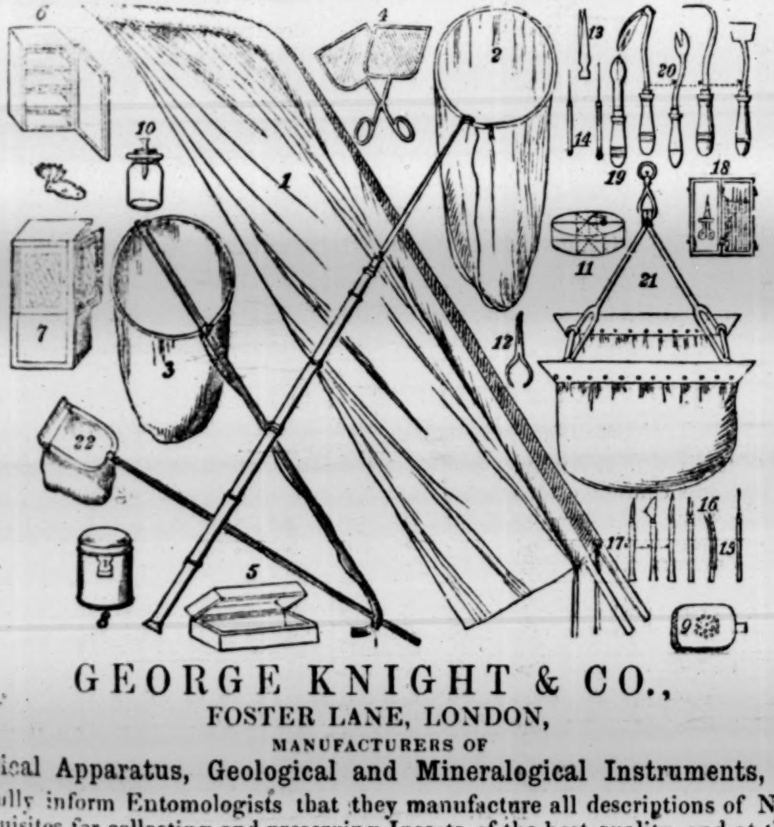

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